drugs (70.75%). The most commonly prescribed anti-rheumatic drugs were NSAIDs and Analgesics (75.60%), DMARDs (20.40%) and Corticosteroids (4.00%). Multiple logistic regression analysis showed that females (OR: 0.55; 95% CI: 0.32-0.95), individuals aged group 18 to 64 years (OR: 0.48; 95% CI: 0.29-0.78) were less likely to receive anti-rheumatic drugs, whereas those seeking care from rheumatologists (OR: 4.38; 95% CI: 2.19-8.77) and those with multiple previous visits (OR: 1.43; 95% CI: 1.26-1.62) were more likely to receive anti rheumatic drugs. **CONCLUSIONS:** Most (7 out of 10) visits for the RA involved use of anti-rheumatic drugs. Drug use patterns varied across age, gender, physician specialty, and previous use of health care. Further research is needed to evaluate the variation across drug classes for RA.

PMS77

RELATIONSHIP BETWEEN THE DURATION OF RHEUMATOLOGY PRACTICE EXPERIENCE AND LIKELIHOOD OF USE AND PERCEPTION TOWARDS BIOSIMILARS IN RHEUMATOID ARTHRITIS (RA) ARENA

Narayanan S

Ipsos Healthcare, Columbia, MD, USA

OBJECTIVES: To assess the relationship between duration of rheumatology practice experience and rheumatologist perception towards biosimilars and the likelihood of use of biosimilars to manage RA patients in the European Union (EU), Brazil, Japan and China. **METHODS:** A multi-country cross-sectional survey was conducted in top-5 EU countries (UK/Germany/Spain/France/Italy), Brazil, Japan and China in April/May 2013 using an online physician panel in the respective geographies; rheumatologists were randomly selected for survey participation to be geographically representative in select countries/regions. Surveys assessed the rheumatologist perceptions of biosimilars in terms of factors that would prevent them from using biosimilars among their biologic-eligible RA patients, and their likelihood of use of biosimilars. Summary statistics are reported across the markets, stratified by years of rheumatology-practice-experience. **RESULTS:** 173 rheumatologists participated in the survey (5EU-58%, Brazil-23%, Japan-11% and China-9%); years of experience practicing rheumatology (across the markets) was: <=10yrs:26%, 11-20yrs:42%, >20yrs:32%. Mean RA patient-volume/year based on rheumatology-practice-experience was: <=10yrs:264, 11-20yrs:323, >20yrs:270. Likelihood of prescribing a biosimilar product to eligible RA patients differed by rheumatology-practice-experience (<=10yrs/11-20yrs/>20yrs): definitely-13%/13%/5%; highly likely-27%/42%/39%; may be/not sure-44%/36%/38%; less/not likely-16%/10%/18%. Perceived duration of use of biosimilars in a small group of patients before prescribing it in larger scale was (by rheumatology-practice-experience <=10yrs/11-20yrs/>20yrs): 1-2yrs:53%/56%/43%, 3-5yrs:16%/11%/14%, 6-10yrs:2%/1%/2%, >10yrs:4%/4%/5%; not-sure:24%/28%/36%. Key factors noted by rheumatologists that would prevent them from using biosimilars were (by rheumatology-practice-experience <=10yrs/11-20yrs/>20yrs): Doubts in similarity to original molecule(56%/63%/59%), inadequate safety/efficacy profile/data(47%/57%/52%), lack of long-term data(42%/39%/57%), lack of national guidelines recommending the use of biosimilars(40%/38%/34%), lack of data from local country/market(40%/31%/25%), lack of trust/confidence in manufacturer(24%/25%/27%). **CONCLUSIONS:** Rheumatologists perceptions varied based on their practice-experience; those with <=10yrs of practice-experience reported the least likelihood of prescribing biosimilars, and a higher proportion of them cited national treatment guidelines and lack of data from local country/market among key reasons preventing biosimilar use.

PMS78

COMPARISON OF CLINICAL CHARACTERISTICS OF PATIENTS WITH RHEUMATOID ARTHRITIS (RA) RECEIVING A BIOLOGIC MONOTHERAPY AND BIOLOGIC COMBINATION THERAPY IN THE UNITED STATES

Narayanan S[1], Lu Y[2], Hutchings R[2], Baynton E[2]

[1]*Ipsos Healthcare, Columbia, MD, USA*, [2]*Ipsos Healthcare, London, UK*

OBJECTIVES: To assess the clinical characteristics of patients with RA who received a biologic monotherapy (Mono) and biologic combination therapy (Combo: Biologic+DMARDs) in the US. **METHODS:** A multi-country multi-center medical chart-review study of RA patients was conducted between Nov2012-Jan2013 among physicians (mainly rheumatologists) in hospitals and private practices to collect de-identified data on patients who were recently treated with a biologic as part of usual care. Physicians were screened for duration of practice (3-30 yrs) and patient volume (incl. >2RA biologic patients/week) and recruited from a large panel to be geographically representative of the US. Eligible patient charts (>5) were randomly selected from a sample of prospective patients visiting each center/practice during the screening period. Physicians abstracted patient diagnosis, treatment patterns/dynamics and patient symptomatology/disease status. This analysis focused on patients currently on Mono and Combo biologics. **RESULTS:** 919 eligible RA patients were included in the analysis; Mono patients: 353 (38%), Combo patients: 566 (62%). Patient characteristics included (Mono/Combo): mean age:47.4/57.8; female:50%/61%; mean weight(Kg):75.7/78.0; top-3 comorbidities: obesity(17%/20%), dyslipidemia(14%/22%, depression/anxiety:9%/16%. Time between RA diagnosis and recent office visit (Mono/Combo):77.1/78.5months; number of biologic-lines of therapy received (Mono/Combo): 1st-line-80%/70%, 2nd-line-15%/20%, >=3rd-line-5%/11%; top-4 biologics used across the two patient groups were: adalimumab/etanercept/infliximab/abatacept. Among patients with data-availability, current lab & disease-severity measures were (Mono/Combo): ESR(mm/h)-23.7/25.0; CRP(mg/dl)-2.6/3.4; rheumatoid factor (positive%):38%/54%; anti-CCP (positive%):31%/45%; overall disease-stage per physician-judgment: mild-67%/62%, moderate-29%/33%, severe-4%/5%; mean-HAQ:0.7/0/9; mean-DAS28:2.3/3.0; mean tender joint count: 2/3/3.4; mean swollen joint count:1.4/2.5. **CONCLUSIONS:** In this cohort of RA patients in the US, over 60% of Mono and Combo patients had mild disease per physician judgment and a majority of them were on 1st line treatment; lab measures and joint counts indicated only slightly higher disease burden among Combo patients. Impact of specific biologic treatments on observed patterns and the need for therapeutic sequencing may warrant scrutiny.

PMS79

WHAT FACTORS ARE ASSOCIATED WITH INCREASING CHARGES FOR MAJOR JOINT REPLACEMENTS BETWEEN 2008 AND 2011?

Chiu GR, Dong X, Wang Z, Meckley LM, Miyasato G

Trinity Partners, LLC, Waltham, MA, USA

OBJECTIVES: This study measured the association between hospital characteristics and changes in hospital charges for major joint replacement (MJR). **METHODS:** 2008 and 2011 hospital charge and reimbursement data were obtained from MJR inpatient Medicare claims. Multivariate linear regression models were used at the hospital level to regress the percent change in hospital charges on hospital characteristics which included hospital demographics and MJR patient summary measures. Independent variables represented both baseline 2008 and change in value/status quantities. **RESULTS:** The analysis included 3,016 hospitals. In multivariate models, many hospital characteristics were significantly associated with the percent change in charges. Hospital type and census region were significantly related to percent change in charges. Specifically, Government and Non-Profit hospitals experienced smaller charge increases than Proprietary hospitals (-5.5% and -4.5% respectively, $p<0.0001$). Compared to the Northeast, the West, South, and Midwest experienced 5.5%, 4.4%, and 3.3% increases in charges on average ($p\leq0.001$), while the Midwest, West, and South were not statistically significantly different from each other ($p>0.05$). Also, a one-day increase in the average length of stay was associated with an average charge increase of 6.7% ($p<0.0001$). Overall, the final model accounted for 9% of the total variance. **CONCLUSIONS:** Hospital characteristics, such as the region and type, as well as changes to average length of stay between 2008 and 2011 were strong predictors of percent change in average charge for MJR. While several other factors were also statistically significantly related to change in charges for MJR, small effect sizes were not practically meaningful. The small percent of variance explained by the model leads us to conclude there are other factors not captured by Medicare data that are additionally responsible for growth in health care costs.

PMS80

HEALTH CARE UTILIZATION COSTS AND MEDICATION USE PATTERNS OF TUMOR NECROSIS FACTOR (TNF) INHIBITORS AMONG TEXAS MEDICAID PATIENTS DIAGNOSED WITH RHEUMATOID ARTHRITIS

Oladapo A[1], Barner JC[2], Richards K[2], Rascati KL[2], Lawson KA[2], Novak S[3], Harrison DJ[4]

[1]*Baxter Healthcare Corporation, Westlake Village, CA, USA*, [2]*The University of Texas at Austin, Austin, TX, USA*, [3]*Austin Outcomes Research, Inc., Austin, TX, USA*, [4]*Amgen, Inc, Thousand Oaks, CA, USA*

OBJECTIVES: To evaluate health care costs and medication use patterns (persistence, discontinuation and switching) in patients with rheumatoid arthritis (RA) on etanercept (ETN), infliximab (IFX) or adalimumab (ADA) in Texas Medicaid. **METHODS:** Prescription and medical claims for Texas Medicaid beneficiaries (18-63 years) with an RA diagnosis (ICD-9-CM code 714.0x) without claims for a biologic agent in the 6-months pre-index (July 1, 2003 to December 31, 2010) were analyzed over an 18-month study period between July 1, 2003 and August 31, 2011 (6-month pre- and 12-month post-index) based on their index biologic (ADA, ETN, or INF). The primary outcomes were 1-year persistence, discontinuation, switching and health care costs (RA-related and TNF inhibitor costs) to Texas Medicaid post-index, adjusted to 2011 US dollars using the medical consumer price index. Cohorts were constructed using propensity score (PS) matching controlling for baseline differences in demographics and clinical characteristics. **RESULTS:** After PS matching, 822 patients (n=274/biologic group) comprised the final sample. The mean age (±SD) was 48.9 (±9.8) years, and the majority (69.2%) were between age 45 and 63, Hispanic (53.7%) and female (88.0%). Post-index mean (±SD) total health care costs were $16,477 (±$9,228), RA-related costs were $13,713 (±$8,309) and TNF inhibitor costs were $12,195 (±$8,517). For each cost variable (total health care, RA-related and TNF inhibitor costs), costs incurred by patients on ETN were significantly lower ($p<0.01$) than those incurred by ADA patients but significantly higher ($p<0.01$) than those incurred by IFX patients. Persistence to index TNF inhibitor therapy and likelihood to switch or discontinue were comparable among groups. Duration of medication use (i.e. persistence) prior to switching or discontinuation of index therapy was also comparable among groups. **CONCLUSIONS:** The data suggest comparable medication use patterns but significantly different health care utilization costs among Texas Medicaid RA patients on ETN, IFX or ADA.

PMS83

UTILIZING NORDIC REGISTRIES TO SUPPORT HEALTH ECONOMICS RESEARCH IN RHEUMATIC DISEASES

Miller H

Karolinska Institutet, Stockholm, Sweden

OBJECTIVES: Rheumatic diseases are often characterized by pain and disability. Many pharmaceuticals are available for their treatment and a considerable number of health economic(HE) studies have been published. Nordic countries maintain long-term comprehensive disease and drug registries. HE analyses, particularly those which are based on registry-data, can provide important information for health care decision makers. The primary objective of this study is to systematically review HE analyses of rheumatic diseases which utilize Nordic registry-data, and to provide a descriptive and critical analysis of this strategy. **METHODS:** Published literature was identified by searching the following databases: MEDLINE; EMBASE; Cochrane Library and Health Economic Evaluations Database; and PubMed. Search terms were pertinent to rheumatic diseases and HE. One reviewer screened and subsequently extracted data from studies which fulfilled inclusion/exclusion criteria. References and citation search was done on included studies. **RESULTS:** 45 HE studies utilized Nordic registry-data. Studies were relevant to Sweden(n=26), Norway(n=11), Finland(n=4) and Denmark(n=4). Study types were modeling(n=13), costing(n=8), work/productivity(n=6), quality-of-life(n=13), and a combination of HE outcomes(n=5). Registry data was used within the studies to characterize patients in regards to clinical(n=29), demographic(n=20), utility(n=18) and cost/